TrueConf Server

Video Conferencing System

Administrator Guide

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About this document

This document is part of **TrueConf Server** video conferencing system documentation package and contains instructions on installation, setting up and use of the system's server part.

For effective work with the document basic level of IT and network literacy is required.

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1 General Information

1.1 TrueConf Server Components

1.1.1 Server Side

- TrueConf Server;
- TrueConf Manager.

1.1.2 Client Side

- TrueConf Client.

> ***Note:*** *See TrueConf Client application user guide to learn how to install and configure TrueConf Client application.*

1.2 TrueConf Server Components Description

1.2.1 TrueConf Server

This component is a software video server. It gets installed as Windows operating system service and provides:

- Client authentication and authorization;
- Client connection, including connection through NAT's and proxy servers;
- Media stream retranslation when direct stream translation is not possible;
- Communication between remote servers connected to the option "Roaming";
- Storing the call history.

1.2.2 TrueConf Manager

This component is dedicated to server component configuring.

TrueConf Manager provides:

- Server registration, start , stop and state monitoring;
- Server log viewing;
- Server IP-address and port set-up;
- Registration of new users, activation and deactivation;
- Revision of support information.
- Group conferencing of different modes.

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1.2.3 TrueConf Client

This is a client application. It is installed on the users' computers and allows making and receiving of video calls.

TrueConf Client provides:

- User authentication in the TrueConf Server system;
- Possibility to make video calls or create and participate in various group video conferences.
- Set up of video and audio input and output;
- Exchange of text messages;
- White board tool for 1- on -1 conferences;
- Slide show tool for displaying of graphic images in 1-on-1 and group conferences;
- Screen sharing for transmission of your desktop screen to one or more participants.
- File transfer in 1-on-1 video calls;
- User address book support and management;
- Call list management;
- Self view display in conferences;
- Support of video formats: SD (320×180), HQ (640×360), HD (1280×720). In 1-on-1 video conferences is supported FHD video format (1920×1080);
- Video and/or audio mute feature;
- TCP and UDP transport.

Note: You can find information on how to connect client application to server in the "Client Application Connection" section of this document.**}**

1.3 Recommended configuration for TrueConf Server system server

- a Dual Core processor
- 1GB RAM
- 20Gb free hard disk space
- 100 Mbit/s Ethernet
- MS Windows Server 2000/2003/2008 operating system.

1.4 Recommended configuration for TrueConf Server client terminal

- Intel or AMD Processor with 2 GHz or higher clock speed
- 512 MB of RAM and 100 MB free hard disc space
- Windows 2000/XP/Vista/7 operating system
- 256 kbps network connection in both directions

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- Webcam
- Full-duplex sound card
- Headset (in order to avoid echo)

1.5 Recommended configuration for the use of HQ mode

- Windows 2000/XP/Vista/7 operating system
- CPU: Intel Core 2 Duo E6400 / AMD 64 X2 4200+
- 1GB RAM
- DirectX 9c compatible video card (at least 256 MB RAM)

***Note*:** To learn more about the use of TrueConf Server client application please refer to the “Client Application Manual” which is also included into the system documentation package.

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2 Server setup in five minutes

When TrueConf Server software is installed and server computer is connected to the network, then the rest of server configuration will take about 5 minutes.

Step 1

Install TrueConf Server software.

Step 2

After the installation of your web browser will automatically start server setup interface.

Step 3

Register the server. To do that enter you registration code. If you are installing server behind the firewall, then in order to complete the registration you should open port 4310 access from inside to internet.

> ***Note:*** For more information see the “Registering the Server” section

Step 4

The server will start using all computer IP addresses on a default TrueConf port - 4307. If you are installing the server behind the firewall or NAT, and some clients will be using the server outside the firewall or NAT, you should open and/or forward port from client connections.

> ***Note:*** For more information see the “Network” section.

Step 5

Wait till the server starts and the status bar shows the corresponding message («Server is working»).

Step 6

In left menu select "Users", then select "User Accounts" tab and add the desired users.

*** Not available in trial version of the server**

Step 7

Distribute the link to the guest page (http://localhost/guest - the exact address may vary) to all registered users of the server. The guest page con-

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tains links for downloading TrueConf Client applications for different platforms, as well as setup instructions. The users will be able to download the client applications for their devices from the page.

Step 8

Distribute the link of the client application to be installed on end-user computers.

Note: For more information see the Client Application Connection section.

TrueConf Server is ready to work.

Now you can configure other server settings. You can find description of other server manager tabs later in this document.

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3 Server installation

To install the server components use your installation package.

You will need a registration code.

Locate and run installation package
Follow the installation prompts.
After the installation finishes, in your browser will launched web interface to configure the TrueConf Server.

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4 Registering the Server

The server should be registered and activated in the TrueConf system.

> ***Note!*** Server does not work when unregistered!

To register the server you need a registration code.

Follow the steps to register the server:

1. Launch TrueConf Manager.
2. For successful registration open internet access to port 4310.
3. Enter you registration code and specify your server name. The server name should be unique. If you don't have the registration code, you can get it using «Get Registration Code» button.

TrueConf Server Activatio
localhost/admin/reg/begin/
TrueConf Server Manager ub02m.trueconf.name#vcs
TrueConf Server Activation
You have to register TrueConf Server in order to activate it.
You can request for a Trial code or buy a permanent registration code using "Get Registration Code" button bellow.
Get Registration Code
Registration Code
Server Name
Server name should be unique. Example: videoserver.your-company.com
Register

> ***Note:*** *to register the server for a second time press "Register" button in the "About" tab*.

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4.1 Offline registration

When registering offline, the web-based setup will create an offline registration file, which must be forwarded to support@trueconf.ru. Make sure to wait for the answer before restarting offline registration. In case of restarting offline registration, the file received by a previous request will not be valid, the application will not be registered and you will have to repeat the procedure again.

4.2 Administering of the server

Server can be administered from any computer in the same local network where it is installed. The access is limited to the following ranges of IP addresses: 10.*, 192.168.*, 172.16-172.31, 127.

At this point the installer does not open a port in the firewall for TrueConf Web Manager. If the administrator wants to administer the server from a remote machine, he/she needs to make sure that the server firewall allows connecting on the port, on which TrueConf Web Manager is launched.

TrueConf Web Manager port is determined during the server installation. By default, port 80 is selected. If it is taken, 8888 is selected. If it is also taken, the user selects the port in the installation dialog window (if the port is not 80, then it is visible in the browser address bar after the colon in the hostname http://localhost:8080).

To access TrueConf Web Manager from the machine on which the server was installed you will not need any password (the host in the browser - localhost or 127.0.0.1).

Remote access requires authorization with the accounts of the Windows users from the group "TrueConf Server Admin". When the server is installed the user account is added to this group.

To give another user access to TrueConf Web Manager, the administrator must add the user account to the "TrueConf Server Admin" group.

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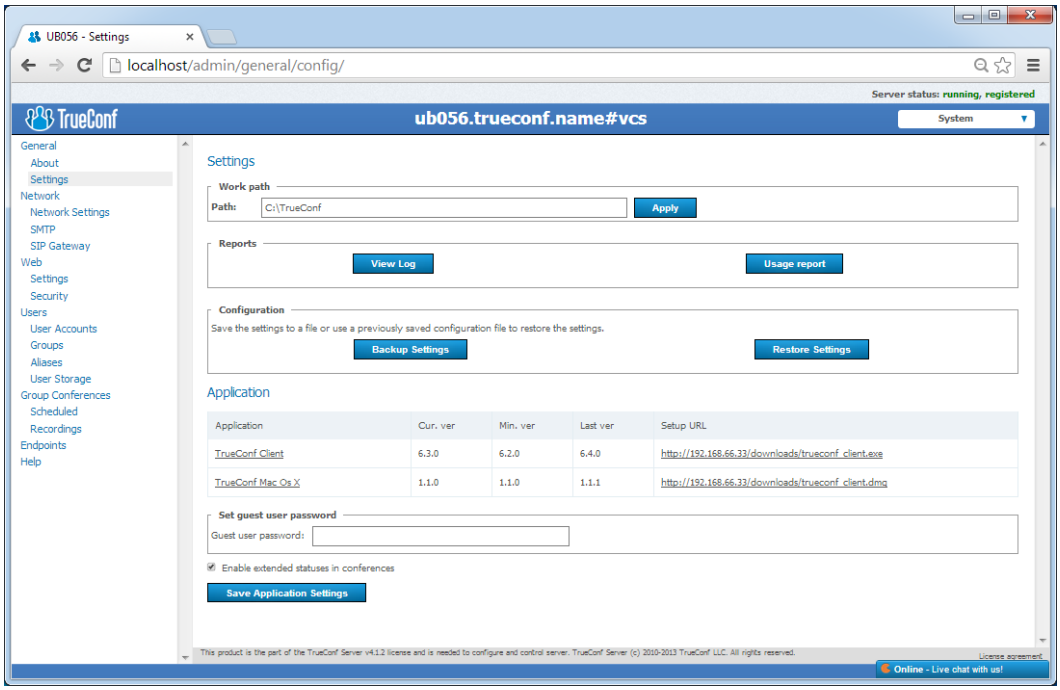
5 Configuring Server

5.1 "General" Groupe of Settings

5.1.1 "About" Section

This page allows you to browse the server information, contact person and his e-mail, and view the available licenses used by the server. Also here you can initiate TrueConf Server registration for a second time.

5.1.2 "Settings" Section



Below you can see a description of the elements of this tab.

Setting	Description
Work path	Server work directory, logs are saved here.
Apply	The link to the home page must be distributed among the users of the server. The users will be able to download the TrueConf Client application on their devices from the guest page.
View Log	Opens the server log viewer
Usage Report	Allow to view a list of statistical reports for each month. Each report consists of two parts: part 1 - detailed information about each conference, part 2 - information about conferences, grouped by user.
Backup Settings	Backs up the server configuration to a file

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Restore Settings	Restores server configuration from the file
Application	The list of client applications, available to use with the server. Every client can be managed independently. To do this click on the application name and change the needed settings in the opened tab - "TrueConf Client Settings" or "TrueConf Mac OS X Settings".
Guest user password	The password used to connect guest users from TrueConf web plugin. The availability of this function will be regulated by the TrueConf Server license.
Enable extended statuses in conferences	Displaying statuses during a conference

TrueConf Client/TrueConf Mac OS X Settings

Setting	Description
Min version	The earliest available version of the client. If the current version of the client application is earlier than the said version, the work of the client application will be stopped and it will be updated in a mandatory manner.
Current version	Indicates the current preferred version of the client application. If the application version is less than the indicated version, the user will be asked to upgrade his client application and given the link to the appropriate version.
Last version	The version of client application to be downloaded with the update. it is indicated in the process of updating.
Setup URL	Link to download the client application.

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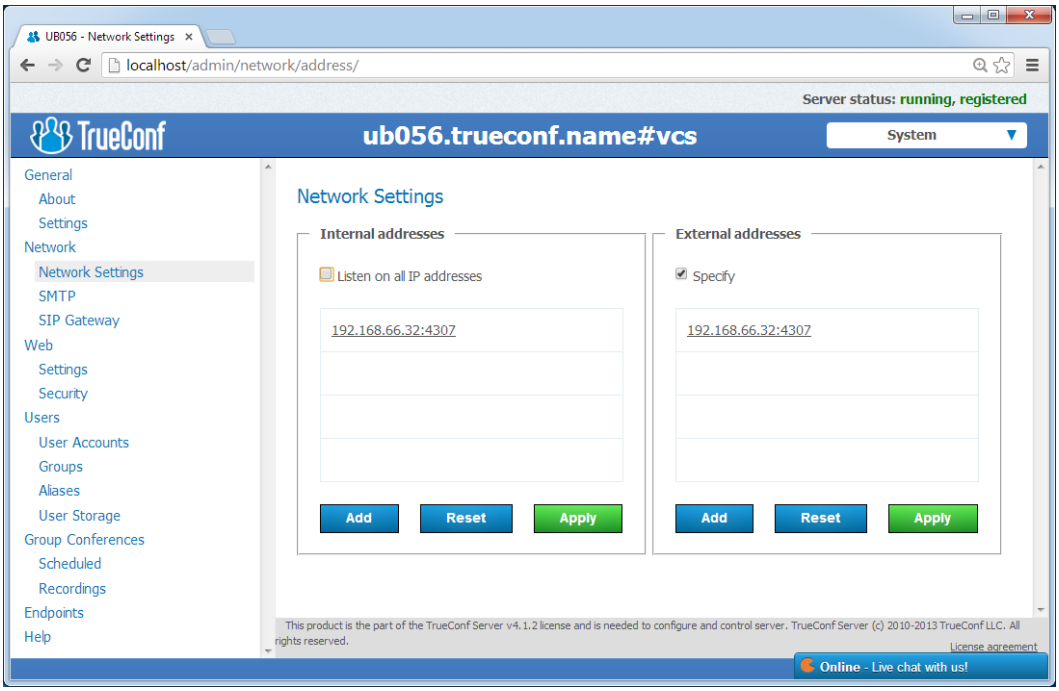
5.2 "Network" Group of Settings

5.2.1 "Network Settings" Section



In this tab the network settings can be changed:

Setting	Description
Internal addresses	IP-addresses and ports that will be used for clients to contact this server. By default the server uses all IP addresses of machine on default TrueConf port 4307. When default settings are on, current connections are displayed in this column. To change internal addresses, uncheck "Listen on all IP addresses" checkbox.
External addresses	External addresses are the ports and IP addresses or DNS names, which help client applications to connect to the server. If the server uses NAT or

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	has DNS names, external addresses can differ from the internal ones. DNS names can be used for host identification. When using addresses and/or ports translation (NAT), translated address and port must be entered into the relevant fields. If you plan to transfer server to another IP address, you need to enter the future IP address and relevant port into the right column. This will help users to store the future IP address during the next session. When the server is switched to the new address, users will switch to it automatically. To specify non-default external addresses, check “Specify” checkbox.
Changing external and internal addresses	Click on IP address to open a window for editing. Clicking on "Delete" will delete the existing IP address. If you want to save the settings, click on "Save". To cancel the changes, click on "Cancel". To add a new internal or external IP address, use the button "Add" and enter the necessary data in the "Host and "Port" fileds. By clicking on "Save" you will add a new IP address. You can return to previous settings by clicking on "Reset". To save the changes click on "Apply".

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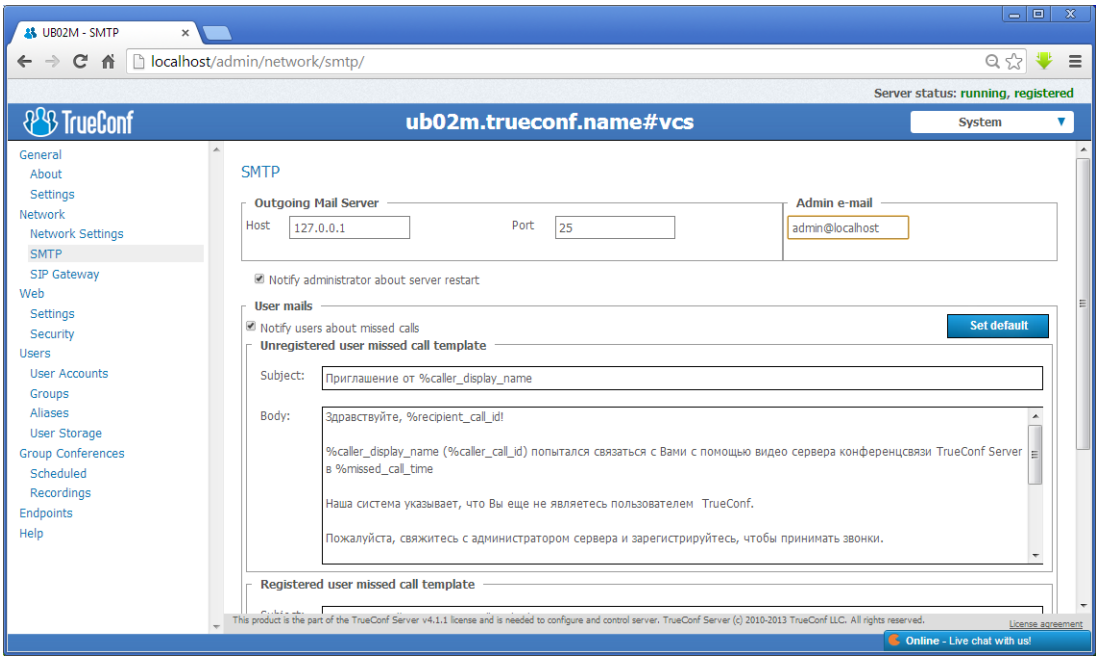
5.2.2 "SMTP" Section

Mail server is used to send notifications to the users about missed calls and to the TrueConf system administrators about the server operation.



Setting	Description
Host, Port	IP address or hostname of the SMTP server used by the TrueConf Server.
Notify administrator about server restart	Allows the server to send notifications by e-mail in case of restart of the service.
Notify users about missed calls	Allows the server to send Missed Calls notifications by e-mail

Note: IP address 127.0.0.1 means that you are using SMTP server on the same computer as TrueConf Server. In this case you will be prompted to verify SMTP server installation on this computer.

In case of a missed call to a registered or unregistered user of TrueConf Server this event will be logged on the server and user will be notified by predefined e-mail.

Note: Server logs time of the call, name of the caller, username. This information is substituted by the server in the template using tags:

- %recipient_display_name – name
- %caller_display_name – display name of the caller

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- %caller_call_id – id of the caller
- %missed_call_time – time of the call

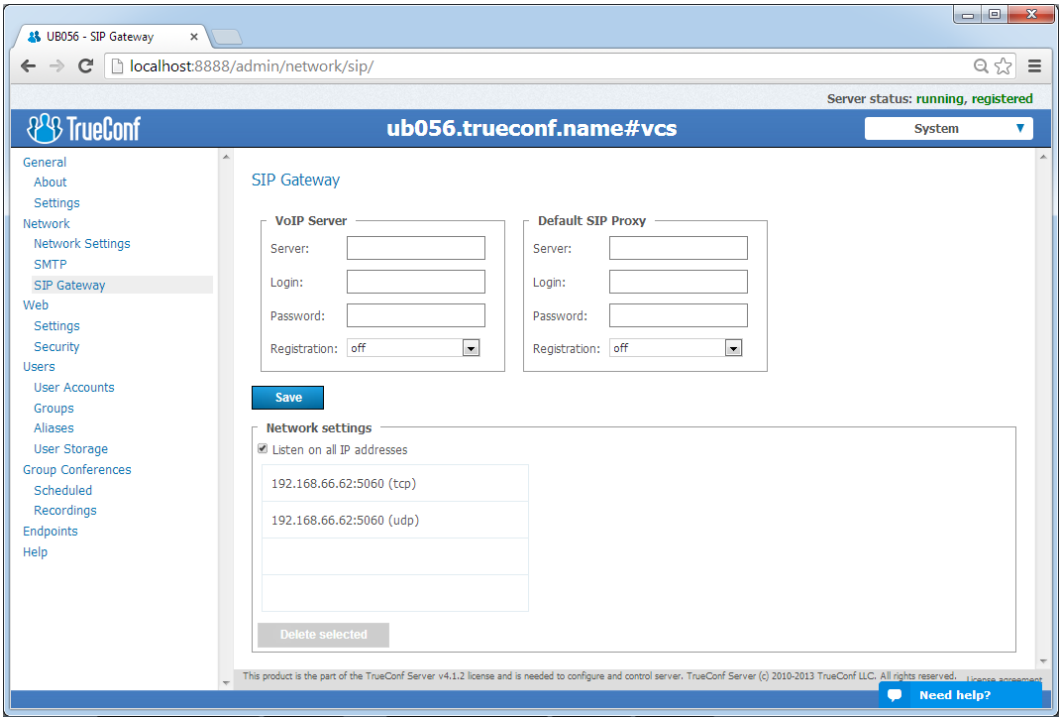
Template of a missed call to registered/unregistered users

Setting	Description
Subject	Subject template
Body	Body template
Apply	A button to save the progress

5.2.3 SIP Gateway Section

Components of this tab allow to configure parameters of the SIP gateway.

NOTE: SIP Gateway tab is displayed only if there is a valid TrueConf Gateway license.



Component	Meaning
Server (VoIP server)	IP-address or host name of the server, which is used for calls in the PSTN.
Login	Account of the VoIP server for the gateway.
Password	Password to the account of the VoIP server, which is used for the gateway in the system.
Server (SIP Proxy by default)	Default IP-address or host name of the SIP server.

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Login	Account of the Proxy server.
Password	Password to the Proxy server account.
Registration	Registration mode on a third-party SIP server using REGISTER request. Possible entries: • **off** - REGISTER request cannot be sent, authorisation is performed during a call; • **permanent** - automatic authorisation on each server's launch, available untill the server shutdown; • **before call** - REGISTER request is sent directly before a call and is supported during a call only.
Network Settings (Listen on all IP addresses)	By default, all IP addresses are used. You can uncheck the field and add the addresses manually. To do this, fill the Host and Port fields. Then click on "Add". The table on the left will display the submitted information. They can also be deleted. To do this, select the one you want to delete by checking the tick on the left and click on "Remove Selected".

5.2.3.1 SIP-terminal calling format from TrueConf Client

One of the formats given below can be used:

- **#sip:Call_ID@Server_name**, where Call_ID is SIP user, Server_name is a host name or IP-address of the SIP server;
- **#sip:Call_ID**, call is directed to the Call_ID user on the server, which is indicated in the VoIP Server/SIP Proxy of the SIP Gateway tab;
- **#sip:@IP**, call to the IP-address of the SIP terminal.

Call routing	**Value**
Via VoIP	Calls are redirected to phone numbers (#tel:89261112233)
Via SIP Proxy	Calls are redirected to user's Call_ID (#sip: james78)

5.2.3.2 Invitation of TrueConf customer to the conference that is held on the SIP server.

- login to the client application TrueConf Client ;
- organize conference on the SIP server (MCU), invite terminals to the conference;
- add to the conference TrueConf ID you used to login to the client application TrueConf Client, as **TrueConf_ID@IP**, where IP – gateway address of the TrueConf Server, which is indicated in the SIP Gateway tab.

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5.2.3.3 Invitation of the SIP-terminal to the conference that is held on the TrueConf Server.

5.2.3.4 Connection using CID (Conference ID)

If several group conferences are organized on TrueConf Server, you can choose the conference directly from the SIP-terminal. For that:

- Organize a group conference in the Group Conferences tab of TrueConf Server configuration wizard.
- Remember the CID (e.g. \c\e22a39ba2a)
- In the address bar of the terminal make call on your CID@IP, where IP – address of the TrueConf gateway. *Note*: some terminals (for instance, Polycom PVX) de-lete special symbols from the address bar. In this case for Polycom PVX you will need to enter \\c\\e22a39ba2a@IP.

5.2.3.5 Connection to the fixed name groupconf

- Organize a group conference in the Group Conferences tab of TrueConf Server configuration wizard.
- Remember the CID (e.g. \c\e22a39ba2a)
- In the Application tab of TrueConf Server configuration wizard create property default_mconf_name, equal to the CID without \c\, for the given example: e22a39ba2a
- Restart TrueConf Server
- Make a call to the name groupconf@IP from the terminal, where IP is address of the TrueConf Gateway.

5.2.3.6 Invitation to the conference from TrueConf Client

- Add to the TrueConf Client address book terminals that you want you want to invite to the TrueConf conference in the format described in the paragraph 5.10.1.
- Organize conference in the TrueConf Server configuration wizard or client application TrueConf Client.
- Invite terminals to the conference by a double click on the terminal name in the TrueConf Client address book.

5.2.3.7 Problems and Solutions

SIP-terminals do not connect with TrueConf Server

Description	Possible reason	Solution of the problem
SIP-terminals cannot connect with TrueConf Server.	Invalid IP-address in the TrueConf Server configurations.	Check rightness and correspondence of the data in the SIP Gateway tab of the configuration wizard: • Address: an IP-address of the network interface used for TrueConf gate-

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		way. • Server: IP of the host interface, which is used for VoIP/SIP server.
	TrueConf Server is offline or has intermediate status.	Run TrueConf Server by clicking System/Start.
	Absent or incorrect parameters of TrueConf Sever on the SIP terminal.	Indicate valid IP-address and TrueConf Server port in the parameter window of the SIP-terminal.
	No network connection.	Check network connection on the PC with SIP-terminal (if SIP-terminal is installed on the PC). To do this you can use “ping” command with IP-address of the PC where TrueConf Server is installed.
There is no video and audio in the conference between TrueConf Server and SIP-terminal.	Incorrect codecs negotiation.	Make sure that SIP-terminal supports one of audio codecs: G.711 (alaw/ ulaw), G.728, G.729a; and video codecs: H.264, H.263.

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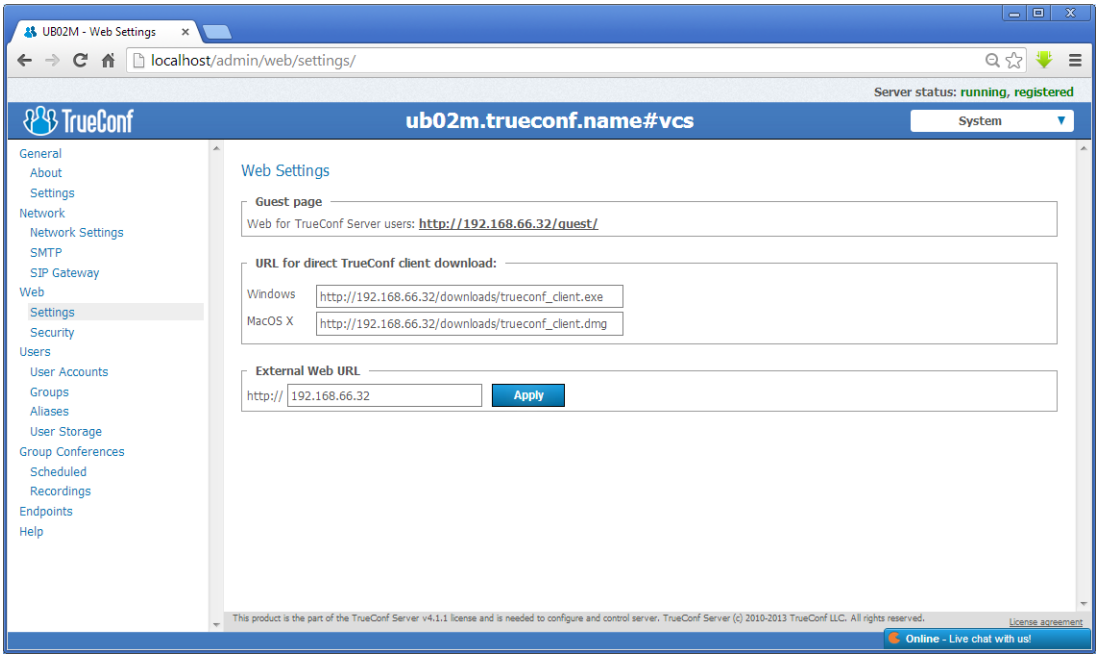
5.3 "Web" Group of Settings

This tab contains settings of external web pages that are available to unregistered users.

5.3.1 "Settings" Section



The "Settings" section includes the following options:

Element	Description
Guest page	Contains the URL of the page with the download links and configuration information for the client applications for various operating systems. TrueConf Server administrator can distribute the URL among the users of the server.
URL for direct TrueConf client download	This section contains direct links to download client applications for Windows and MacOS X.
External Web URL	This section allows the administrator to configure the URL of the TrueConf Server external page. The option can be used to correct the URL formation for all external pages of TrueConf Server.

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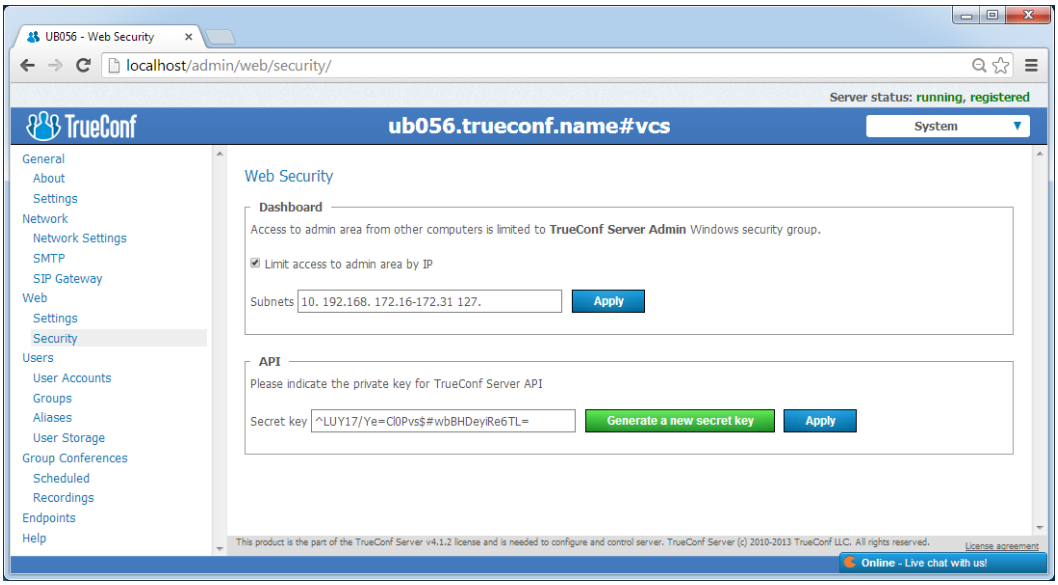
5.3.2 "Security" Tab



In this tab you can limit the access to the management of your server. To do this, simply tick the appropriate field and click "Apply."

By default, the "Subnets" field displays the subnets that can be controlled.

API

To ensure that TrueConf Server works with other products through the Internet in roaming, the network administrator should connect to Directory. To secure the connection he must use secret security key. After it is generated, click on "Apply".

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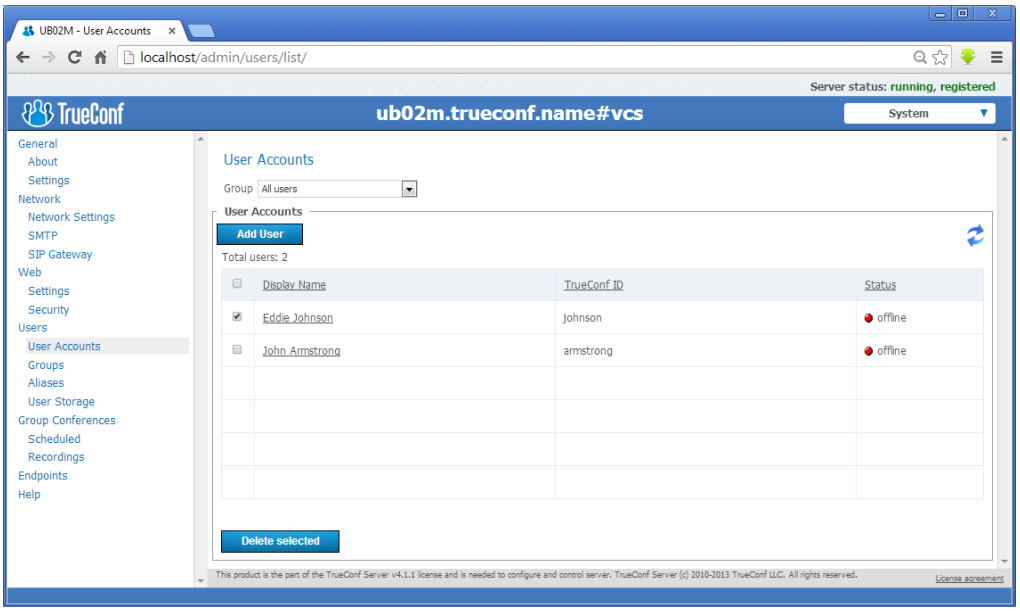
5.4 “Users” Group of Settings

5.4.1 “User accounts” Section

*** Not available in trial version of the server**



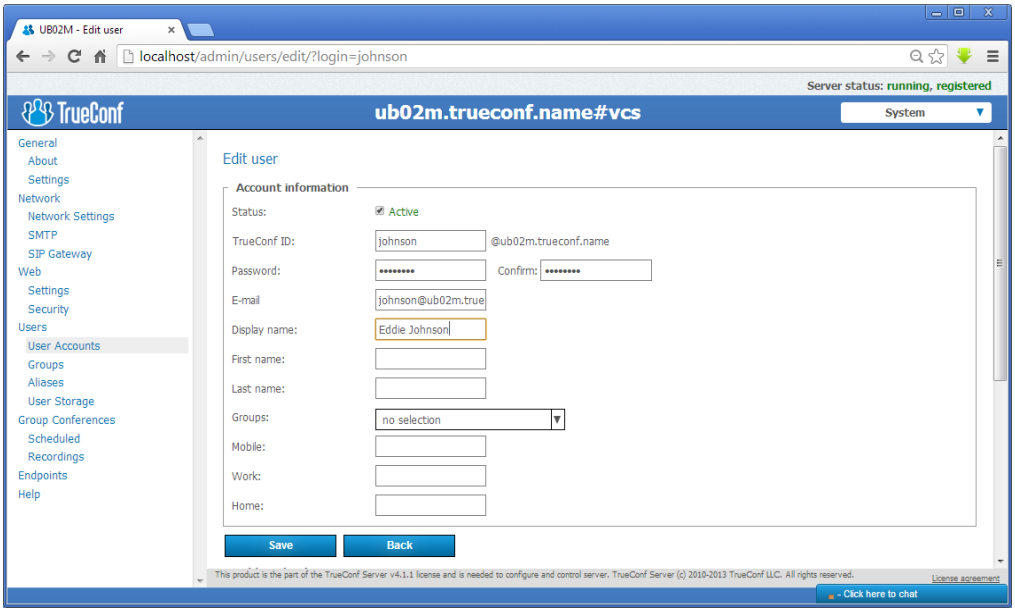
In User Accounts section you can add and manage users.

Press “Add User” button to add new user. Clicking on this button will open a form for filling in the information about the user.

To edit user, click on him/her in user list.

In LDAP mode user edit is not possible, edit users using your LDAP directory tools.

To delete the user tick the box on the left of his name and click on "Delete Selected".



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Following is the list of user account attributes.

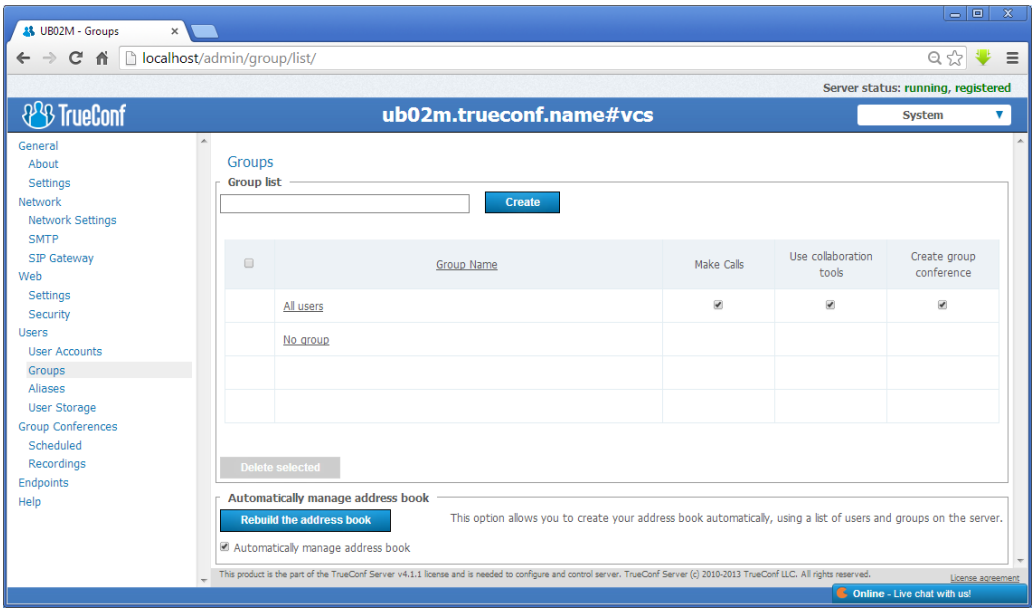
Element	Description
Status	Can be Active or Passive. Passive users cannot connect with the server but their account will not be deleted.
TrueConf ID	Mandatory field. It is used for authorization and calls. Full TrueConf ID contains this TrueConf Server registered server name.
Password, Confirm	User's password to log in to the client application.
E-mail	E-mail for user notification
Display Name	If this field is left blank then it will be filled in automatically by joining the TrueConf ID
First Name, Last Name	Optional fields. Personal data.
Groups	User may belong to some group.
Mobile/Work/Home	The fields are not required. Here you can add home, mobile or work phone number of the user.

Adress book

To add a user to the Address Book, type his TrueConf ID and display name in the corresponding fields and click on "Add".

5.4.2 "Groups" Section

*** Not available in trial version of the server**



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In this section you can manage groups, add and remove users from them. Also here you can edit following rights of group users.

- Allow or deny 1-on-1 calls
- Allow conference tools usage
- Allow creation of group conferences

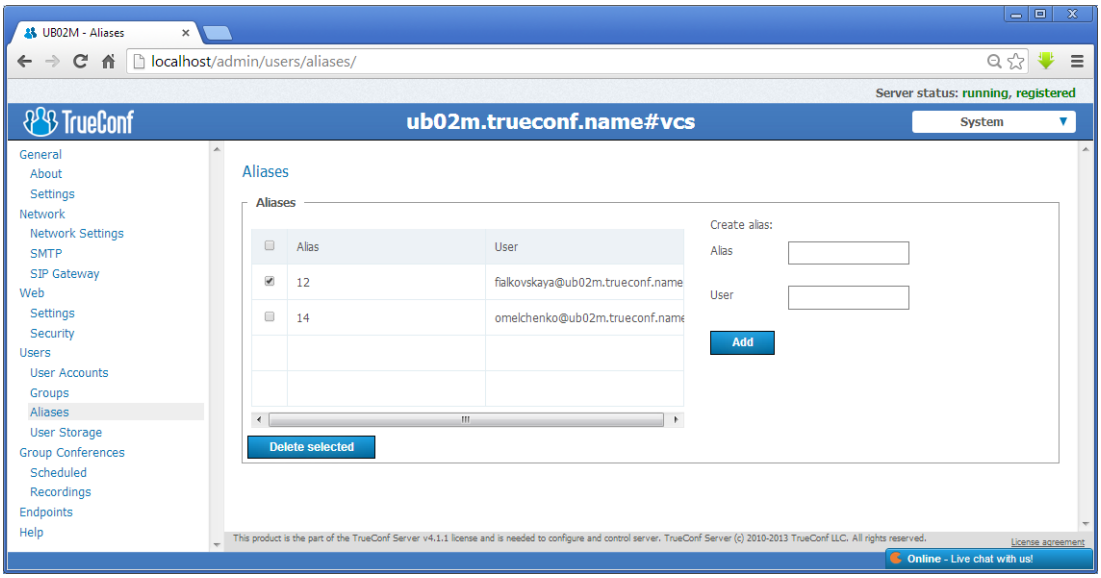
Automaticly manage the address book

A checked box for automaticly managed address book means that new users will be automaticly added to address books of every user.

To recreate the address books of the users, use the appropriate button.

5.4.3 Aliases Section

In this tab PSTN users can dial TrueConf user not by TrueConf ID, but with the help of an alias (extension). You can set an alias to a TrueConf user, that will be used to dial a person under the corresponding configuration of the ATE from our system.



Component	Meaning
Alias	Alias is entered by a user into the corresponding field. It can contain letters and digits. The Alias can contain up to 80 symbols. Aliases are updated after server restart.
User	You can choose a person from a list of users or enter his/her TrueConf ID into the corresponding field. After the alias is created you can see an alias and TrueConf ID of a user. User name is not unique: one user can have several aliases.

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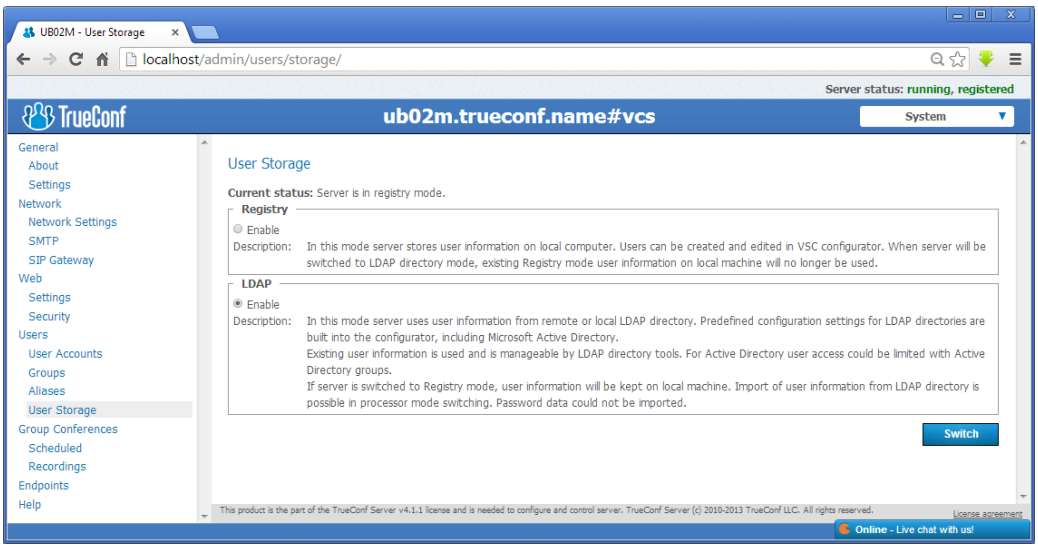
After typing an alias click on "Add".

To delete an alias from the list, tick the box on the left of his name and click on "Delete Selected".

5.4.4 "User storage" Section

*** Not available in trial version of the server**


UB02M - User Storage
localhost/admin/users/storage/
Server status: running, registered
TrueConf
ub02m.trueconf.name#vcs
System
General
About
Settings
Network
Network Settings
SMTP
SIP Gateway
Web
Settings
Security
Users
User Accounts
Groups
Aliases
User Storage
Group Conferences
Scheduled
Recordings
Endpoints
Help
User Storage
Current status: Server is in registry mode.
Registry
Enable
Description: In this mode server stores user information on local computer. Users can be created and edited in VSC configurator. When server will be switched to LDAP directory mode, existing Registry mode user information on local machine will no longer be used.
LDAP
Enable
Description: In this mode server uses user information from remote or local LDAP directory. Predefined configuration settings for LDAP directories are built into the configurator, including Microsoft Active Directory.
Existing user information is used and is manageable by LDAP directory tools. For Active Directory user access could be limited with Active Directory groups.
If server is switched to Registry mode, user information will be kept on local machine. Import of user information from LDAP directory is possible in processor mode switching. Password data could not be imported.
Switch
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TrueConf Server allows two modes of data storage - Registry and LDAP. Their changeover can be done at any given moment by pressing the «Switch» button in the «User database» tab.

5.4.4.1 Registry Mode

In this data storage mode the server keeps user information on a local computer. It is possible to add and delete new users from the configuration table. If the storage mode on the server has been changed from the Registry Mode to LDAP then the already existing user records won't be used any more.

5.4.4.2 User storage tab in the Registry Mode

Element	Description
Switch	Switching of the data storage modes

5.4.4.3 LDAP Mode

In this data storage mode the server takes advantage of the user information from the remote or local LDAP directory. LDAP settings comply with Microsoft Active Directory by default. You can manage the user information with the help of LDAP Directory standard management tools. For Active Directory the user rights can be defined depending on the Active Directory group to which a user belongs.

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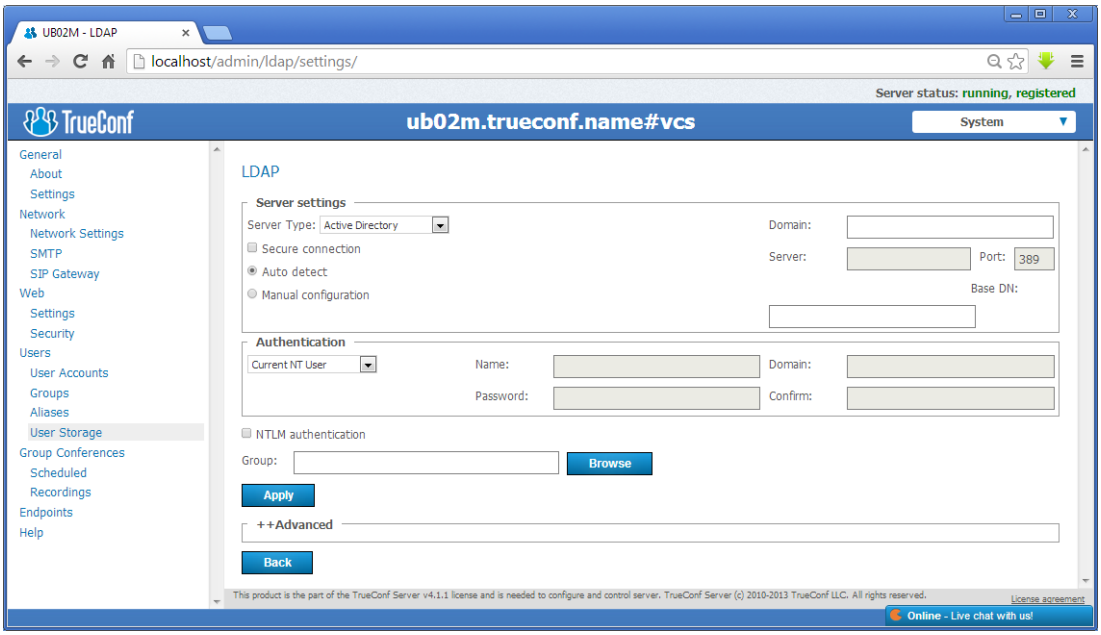
5.4.4.4 Switching user database to the LDAP Mode

Element	Description
Automatically manage address book	Automatic add-on of all the users to every user's address book
Switch	Switching of the data storage modes.

5.4.4.5 LDAP settings

LDAP tab becomes available when "User storage" is works in the LDAP mode. LDAP mode availability can be limited by TrueConf Server license.



Element	Description
Server type	LDAP Server type.
Secure connection	Connection to the LDAP in the safe mode. Only in this case safe transmission of the user information through the network is ensured.
Auto detect / Manual configuration	Automatic or manual choice of the LDAP server.
Domain (available only in the Auto detect mode)	In the automode the LDAP server can be chosen among the servers by default of the DNS domain, specified in this field. Default servers are being chosen according to the relevant DNS-notes of SRV type. For Active Directory DNS domain name AD can be indicated here.
Server / Port (available only in the	LDAP server address and port

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Manual configuration mode)	
Base DN	Core LDAP context.
Authentication	TrueConf Server authorization modes on the LDAP server.
NTLM Authentication	After choosing this option the users can automatically get authorized in the system by using the current Windows user account. The option is available only for the systems working on the basis of Microsoft Active Directory. For NTLM authentication work it's necessary that the server on which TrueConf Server software is installed is located in the same AD domain with the users.
Name, Domain, Password, Confirm	Authorization parameters on the LDAP server.
Group	For Active Directory in this field it's possible to indicate LDAP - group of users, who can get authorized on the TrueConf Server. To choose a LDAP-group using the Browse button you need to fill in the spaces for connection to the LDAP server (Server Settings and Authentication), including Base DN field. After choosing the group click on "Apply".
Additional	Additional LDAP parameters. Allow to adjust the parameters to other types of LDAP-servers.

When changing from LDAP Mode to Registry it is possible to import records about the users. For that in the dialog window, which will appear after pressing the Switch button, you need to tick the Import User information option.

Note: The users' passwords are not imported. After being imported the users' accounts are marked as «inactive» (see description in the «User accounts» tab).

Directory of groups and users registered on the video-conferencing server. This tab allows to create and manage the user's groups.
User Accounts tabs allows creating groups and managing rights. In the Registry mode a user can belong to one (or more) of the created group. You can edit his/her attributes in the Edit user information window. In the LDAP mode this window allows to define rights for several LDAP groups. User attribute can be defined in the LDAP folder.

Note: On the server the <*Not in group*> is created by default.

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5.5 "Group Conferences" Group of Section

This section allows you to manage group conferences.

5.5.1 "Sheduled" Section

This tab allows administrator to create and manage group conferences.
TrueConf Server supports three types of group conferences in two modes – normal and UDP Multicast.

Symmetric Group conference *(Symmetric)*

- Can have up to 16 participants at the same time in the normal mode and up to 16 users in the UDP Multicast mode (number of users is limited by the TrueConf Server license;
- All users can see and hear each other.

This conference type availability is limited by the TrueConf Server license

Asymmetric conference *(Asymmetric)*

- Can have up to 16 participants at the same time;
- One user is chosen to be the Host. He can see and hear everybody;
- Other users can see and hear only the Host.

Conference type availability could be limited by TrueConf Server license

Role based conference *(Role based)*

- Can have up to 120 participants at the same time in the normal mode and up to 250 users in the UDP multicast mode;
- No more than 4 users can transmit video and audio to the others. They are called "broadcasters"
- Other users can hear and see broadcasters. They can give their opinion. They can become "broadcasters" if the Host allows them.

This conference type availability can be limited by the TrueConf Server license.

Note: When the conference is getting started the administrator chooses the user who will be the Host.
Other roles will be given by users in a conference. Look for more information in the client application User Manual

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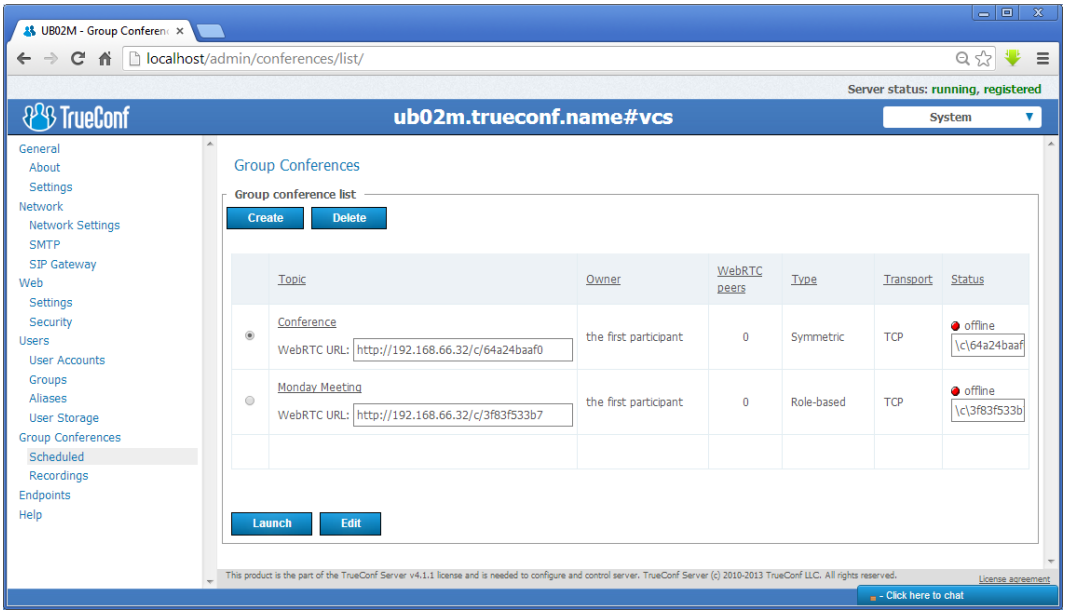

Element	Description
Topic	Conference Topic
Owner	TrueConf ID of the conference host
WebRTC peers	The number of participants, connected to the confeence via WebRTC. It is shown in the conference.
Type	Chosen type of group video conference: symmetric, asymmetric or role-based.
Transport	According to the chosen type of conference may be: • UDP – corresponds to UDP Multicast • TCP – corresponds to other types
Status	Status of the conference
Create	Add group video conference. In the trial version of the server this buttion will be unavailable. Only one conference is available to the user of the trial version - the one indicated in the list of scheduled group conferences. This conference may be edited, attended and deleted. You cannot create other conferences in the trial mode.
Delete	Delete group video conference
Launch	Start group video conference
Edit	Edit group video conference
WebRTC URL	The address of the page, which broadcasts group conferences via WebRTC.

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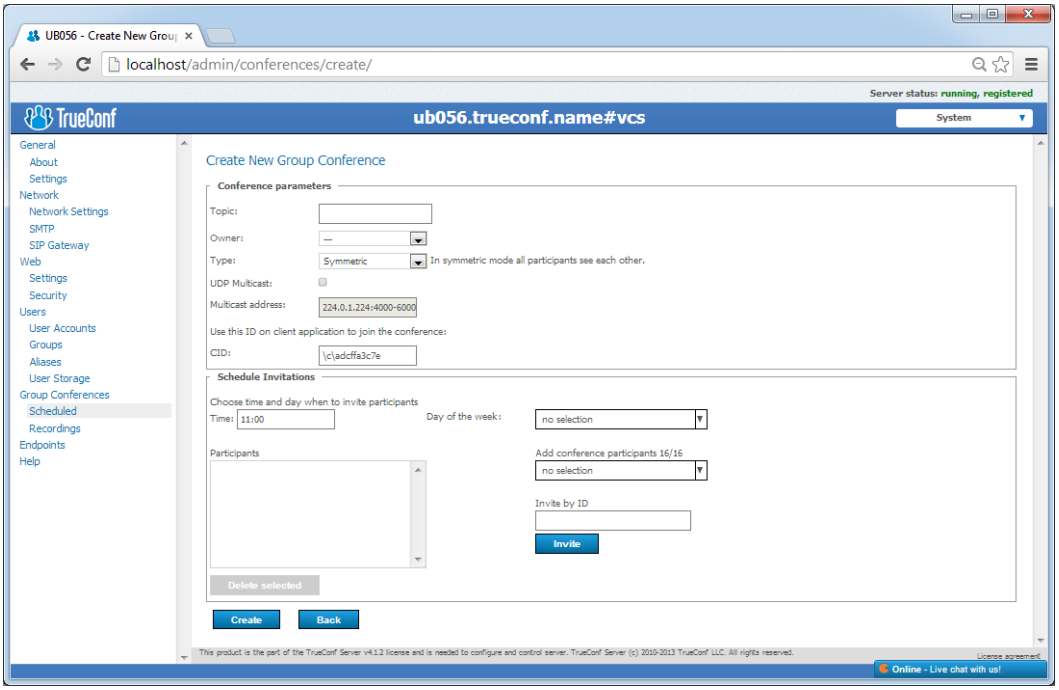
Note: Current release supports WebRTC broadcasting in test mode; only Chrome browsersare supported. The number of simultaneous connections are limited by the license.

Following options are available when conference is created or edited.



Element	Description
Topic	Topic of the conference
Owner	The filed to choose the Host of the cnference from the list of users. After choosing the Host of the conference, his name automatically appears in the list of participants. Previous Host will not be deleted.
Type	Type of the conference • Symmetric; • Asymmetric; • Role based.
UDP Multicast	UDP Multicast allows to use local network resources more efficiently. In this mode video and audio streams are transmitted only in one UDP Multicast domain. Such domains can be set up in local area network (LAN) or VPN. In the internet UDP Multicast is not allowed by default. More availability can be limited by TrueConf

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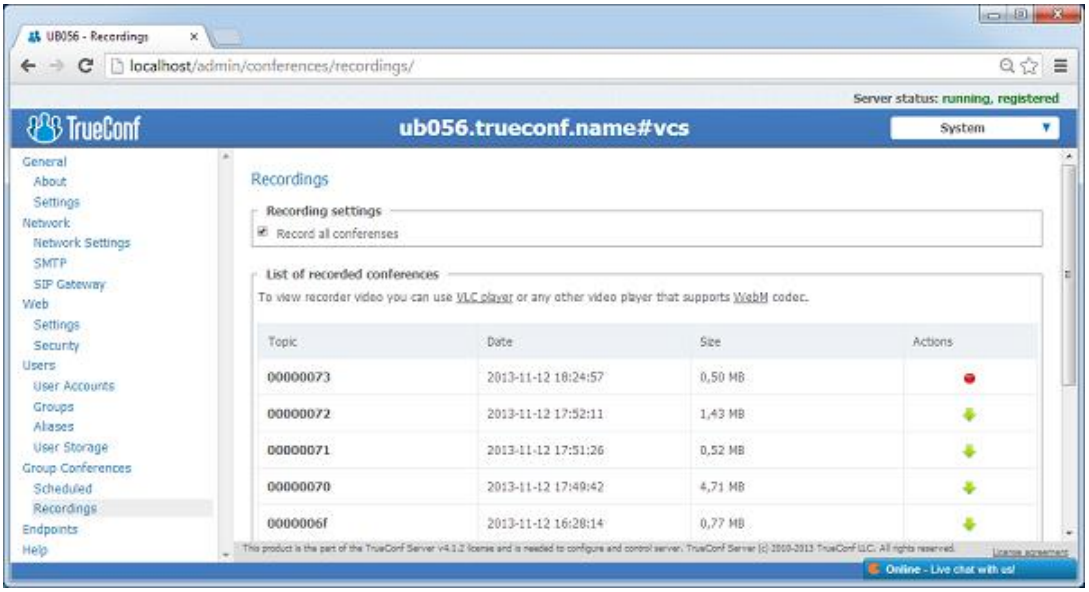
	Server license
Multicast address	The field to indicate Multicast/Broadcast IP address. By default it is 224.0.1.224:4000-6000.
CID	Conference ID that users can use to join the conference
Schedule Invitations	Here you can schedule a video conference. Indicate time and date of the scheduled meeting and then select users from the list to invite. Click on "Create". *** Not available in trial version of the server**

5.5.2 "Recordings" Section

This tab allows you to manage recording settings and lists previously recorded conferences.



List of recorded conferences

Element	Description
Topic	Indicates the name of the conference
Date	Date and time of the recorded conference
Size	Size of the recorded file
Actions	During the recording it will show a red indicator. When the recording has stopped and the conference has finished the indicator will be a green arrow that will lead to the file with the recorded conference.

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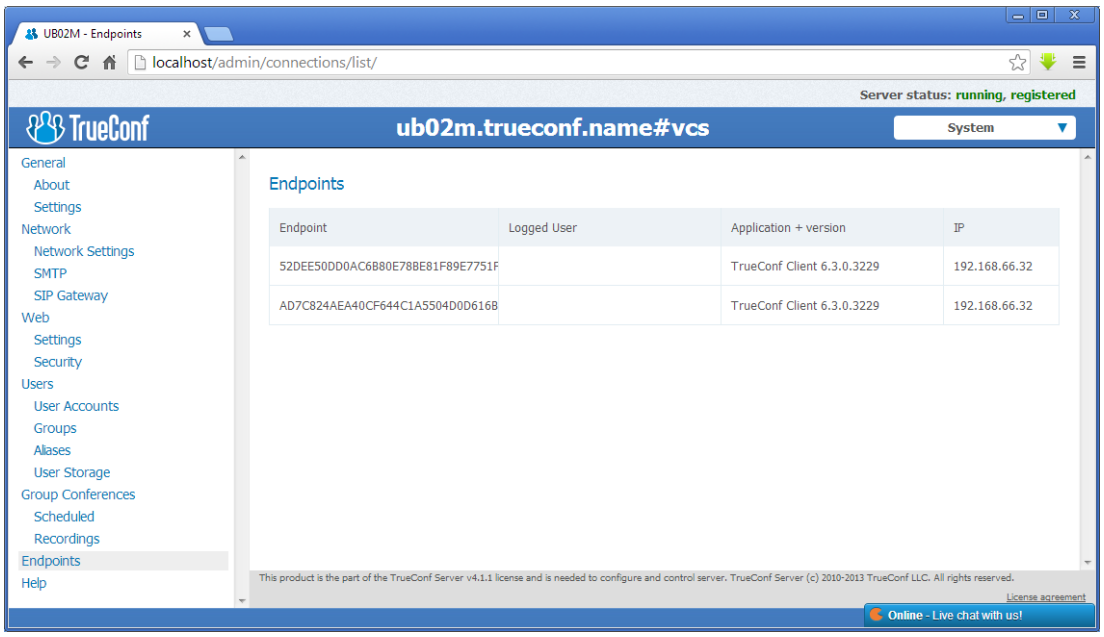
5.6 Endpoints Section

This tab allows to view information about the endpoints.



Element	Description
Endpoint	Name of the Endpoint, registered on the server. Endpoint's name is unique and depends on the computer and client software.
Logged User	TrueConf ID of the users connected to the server at the moment.
Application + version	Name of the client's software and version of the software.
IP	The user IP-address

5.6.1 Sound capture and playback information

Example of Endpoint's properties:

```
Audio Capture:

 Microsoft Sound Mapper
 Avance AC'97 Audio
 Logitech Microphone (Pro 4000)

Audio Render:

 Microsoft Sound Mapper
 Avance AC'97 Audio
```

5.6.2 Video capture device information

Example of Endpoint's properties:

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```
Video Capture:
 Logitech QuickCam Pro 4000
 NAS Polycom Video Source Filter
 vvd.dll
```

5.6.3 DirectX information

```
Direct X:

Version:      9.0
Driver:       ati2dvag.dll RADEON 7200 SERIES
Resolution:   1024x768, 32 bit
Video Memory: total - 29679616, free - 29679616
Capabilities: | Bu | Bd | Ou | Od |BFcc|OFcc|YUY2|UYVY| HB |
              | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
DX INIT OK
```

5.6.4 DirectX features description

Properties	Description
Version	Version of the installed DirectX
Driver	Name and description of the video card driver
Resolution	Screen resolution and number of colours
Video Memory	Video memory volume
Capabilities	Current driver capacities
Bu	Upward scaling
Bd	Downward scaling
Ou	Upward scaling using overlay
Od	Downward scaling using overlay
BFcc	Scaling without using RGB video data representation
Ofcc	Scaling using overlay without using RGB video data representation
YUY2	Ability to use video data in the YUY2 format when displaying something on the screen
UYVY	Ability to use video data in the UYVY format when displaying something on the screen
HB	bilinear upward scaling

The assumed terms: 1 – is supported, 0 – not supported.

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5.6.5 Connection information

Example of Endpoint's properties:

```
Network Info:

Type:       I don't know
Broker:     srv1:1
Host:       192.168.61.205
Port:       4307
Protocol:   InternetOptions
```

5.6.6 Network Test information

```
Network Test:

 Parameter          |      IN   |      OUT    |
 ---------------------------------------------|



 Bitrate, kBit      |  10000    |     9983    |
 Total, kB          |   7499    |     7499    |
 Jitter Max, ms     |     20    |       10    |
 Jitter Min, ms     |      0    |        0    |
 Response, ms       |     50    |        0    |
 ---------------------------------------------|
 Date:            Thu Jan 22 17:08:19 2004
```

Properties	Description
Total	Total amount of information transmitted during the Network Test
Jitter Max	Maximum deviation of the arrival time of the packet in the network from the mean value
Jitter Min	Minimum deviation of the arrival time of the packet in the network from the mean value
Response	Server response time

5.6.7 Last conference information

Example of Endpoint's properties:

```
Last Conf:

 Name          0000001d@srv1:1
 Bytes   s/r     73/0      kB
 Bitrate s/r     12/0      kbit
 Duration      00:00:46
```

Properties	Description
Name	Name of the conference
Bytes	the number of sent / received KBytes

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Bitrate	the average throughput when sending / receiving data
Duration	Duration of the conference (hh:mm:ss)

5.6.8 System information

Example of Endpoint's properties (It looks like PC is not equipped with a camera):

```
Hardware Config:

Video Capture:   None
Audio Capture:   Avance AC'97 Audio
Audio Render:    Avance AC'97 Audio

sys_conf:

Windows 2000 Advanced Server Service Pack 2 (Build 2195)
Proc: Type 586 Level 6;
Client: TrueConf
```

5.6.9 Events leading to the updating of information about the Endpoint

The following information will be updated when a connection with the server is established or resumed:

- Current Network Info Type;
- Audio Capture, Audio Render, Video Capture, Direct X – updates during client software start;
- Hardware Config – updates during application shutdown.

Updates during a conference:

- Last Conf Name.

Updates after running of the Network Test (menu Setup/ Network in client application):

- Network Test.

Updates when logging in to the server:

- System information.

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6 Client Application Connection

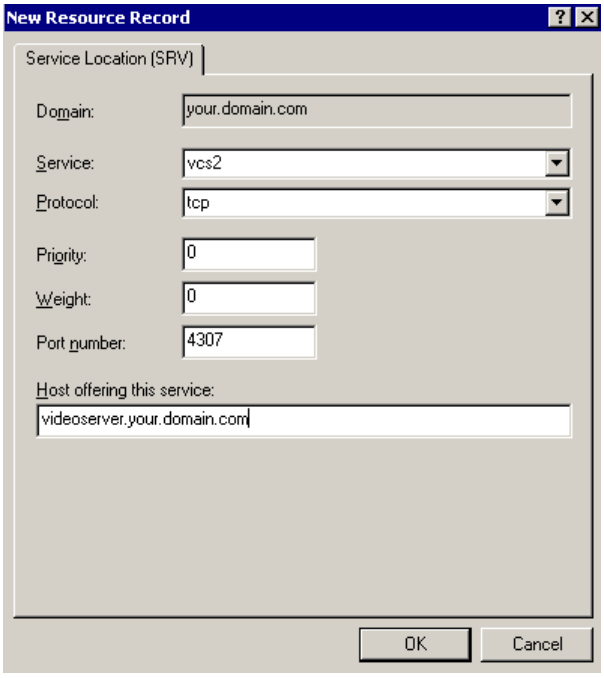
6.1 Connection using auto discovering

The client software of TrueConf includes a function of automatic search for the local server TrueConf Server (auto-discover). It is possible to install the client application without any information about your local TrueConf Server. In this case all information about the server will be detected automatically by using DNS. To do this you need to specify the address of the server in users primary DNS (**primary DNS suffix**).

You need to create SRV record in the domain for **vcs2.tcp** service and specify the TrueConf server address and port.

The following example shows how to do this using DNS utility in Microsoft Windows 2000/2003 Server:

1. Navigate to root of the desired domain.
2. Choose «Other New Records…» in a right-click menu.
3. Choose type «Service Location».
4. Set the following parameters.



In this example server has address **videoserver.your.domain.com** and port **4307**. Please note that protocol name (**tcp**) does not contain underscores.

6.2 Configuring the client application without using auto discovering

Step 1

Open TrueConf Web Manager home page on client computer

Step 2

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Download client application for your system.

Step 3

Install client application.

Step 4

If required, connect client application to server using instructions on TrueConf Web Manager home page.

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7 Set up of the previously installed client application to work with the video conferencing server

7.1 Manual configuration

Go to the application network settings **(Setup | Network ...)**.

Turn off the “Connection default” ("Default server connection"), if it is enabled.

Click "Advanced".

Enter the IP address or DNS name and port of the server in the appropriate fields.

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8 Roaming between servers

Roaming allows subscribers of different TrueConf Servers to make video calls, conduct group conferences and use collaboration tools. The server which has a "Roaming" option enabled provides media streaming between remote servers that support this feature it too. The number of servers involved in Roaming is unlimited. Group video conferences will be conducted with regard to the limitations specified in the license of the server, initiating the connection.

Video calls and group conferences during Roaming are held on the same principle as within one TrueConf Server. No additional server adjustments should be done when using Roaming feature. Still, the following conditions are to be observed: you need to have license for TrueConf Server with Roaming feature for all servers that participate in Roaming, possibility for all servers and subscribers to connect to your server during Roaming.

The server should be available to other servers by its name, indicated at registration. The server can be registered on the existing DNS name, as well as be specified by the actual server address with the help of the SRV records DNS. To read more please see section "Connection using auto discovering".

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9 Server Diagnostics

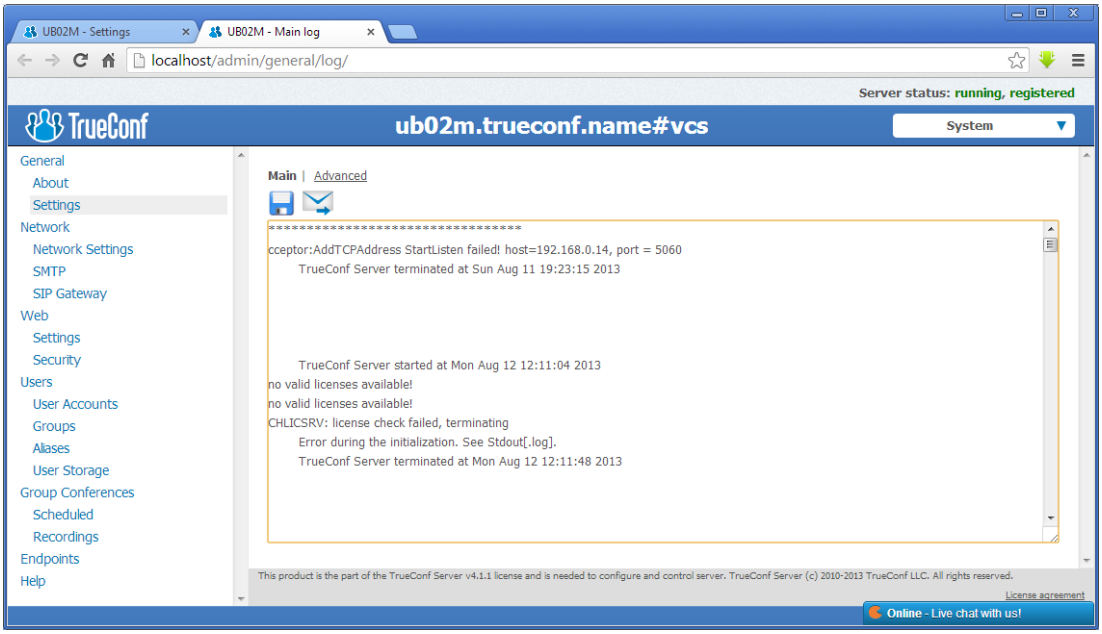
9.1 Server status

Server status is shown in the “Server Status” field in green (if the server is working) or in red (if it has stopped) in top right corner of the web management tool window.

9.2 Server’s log files

You can access the server by clicking on «See the log» in the «Settings»

menu.



9.3 Change the server language

You can change the language of the program directly from the Web management tool. To do this, click on "System". From the drop-down menu select the appropriate language.

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10 Troubleshooting

10.1 Server does not start

Trouble: Trouble: Server does not start; the Current State field contains a message “The service is not running” in red.

1. **Possible reason:** You have no license, or the license is expired

   Workaround: contact your reseller or distributor.

2. **Possible reason:** Some server files are missing or have been damaged.

   Workaround: reinstall TrueConf Server.

10.2 Information shown in manager program is corrupted or couldn’t be saved.

Trouble: Your changes in manager are corrupt or couldn’t be saved. After the manager has restarted some information is missing.

Possible reason: No access to registry or registry is corrupt.

Workaround: Grant read-write access to registry. Open manager as a user with administrator rights if needed. Reenter the information.

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